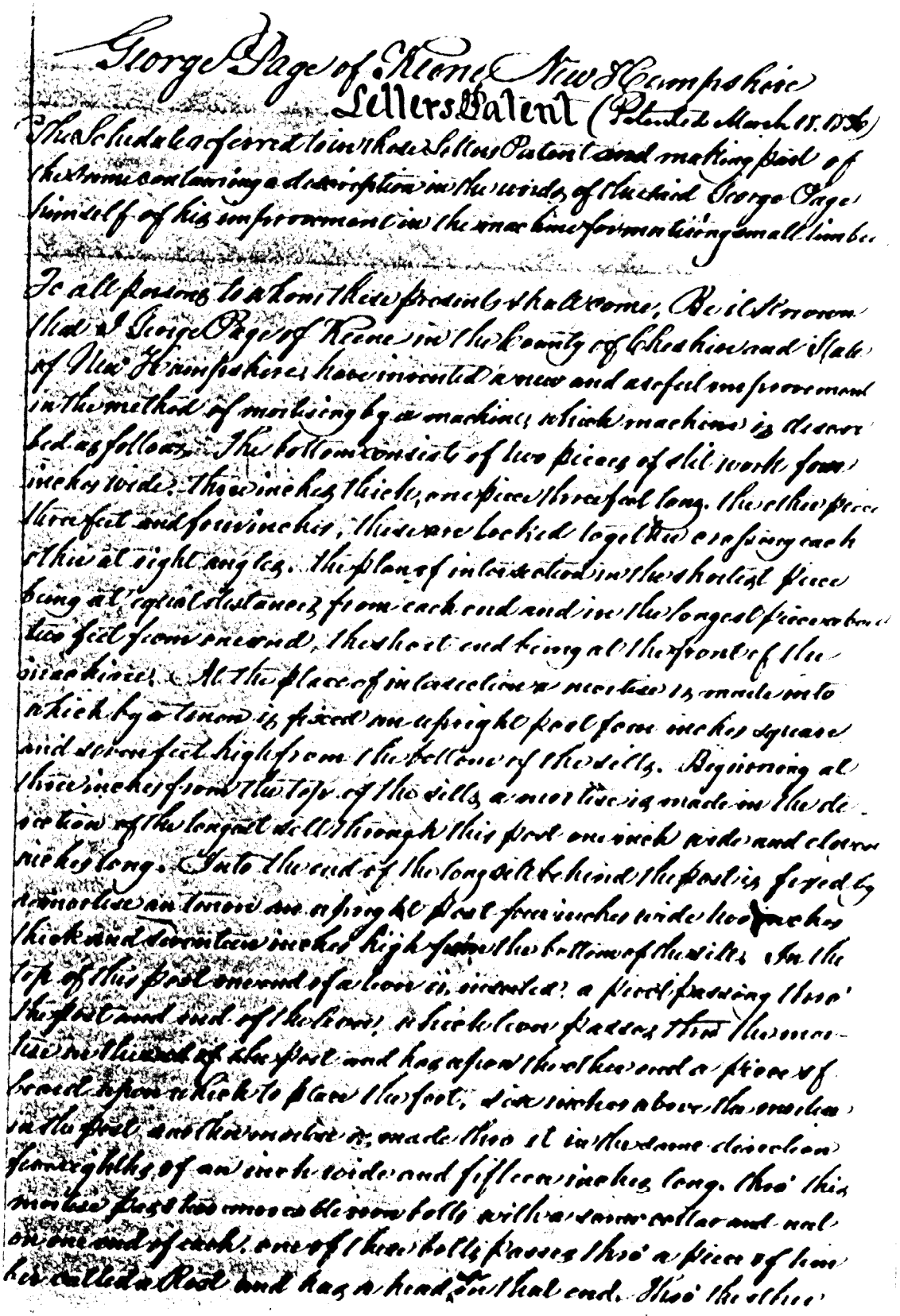
(12) **United States Patent**
Page

(10) **Patent No.:** **X9505**
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(54) **MORTISING & BORING MACHINE**

(76) Inventor: **George Page**



George Page of Keene New Hampshire
Letters Patent (Patented March 17. 1834)
The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said George Page himself of his improvement in the manner of mortising small timber

To all persons to whom these presents shall come, Be it known that I George Page of Keene in the County of Cheshire and State of New Hampshire, have invented a new and useful improvement in the method of mortising by a machine, which machine is described as follows: The bottom consists of two pieces of oak wood four inches wide. The one leg which is one piece three feet long. The other piece three feet and four inches, which are locked together in a spring each other at right angles. The plane of inclination in the shortest piece being at equal distances from each end and in the longest piece about two feet from one end, the short end being at the front of the other piece. At the place of inclination a mortise is made into which by a screw is fixed an upright post four inches square and seven feet high from the bottom of the bills. Beginning at three inches from the top of the bills a mortise is made in the direction of the longest bill through this post one inch wide and eleven inches long. Into the end of the long bill behind the post is fixed by a mortise an iron one upright post four inches wide two inches thick and seventeen inches high from the bottom of the bills. On the top of this post one end of a iron is inserted a piece passing through the post and end of the iron. A circular iron plate with a mortise in the middle of the plate and hag nails on the other end a piece of board upon which to place the foot, five inches above the mortise in the post and two inches in length is made. It is the same description of mortise eight of an inch wide and fifteen inches long. This mortise plate has one or three screw bolts with a screw collar and nut on one end of each one of these bolts passes through a piece of timber called a Rest and hag a head on that end. Through the other

end of the bell a hole is made blind which passes an iron in the shape of a segment of a circle each end of which is attached to the low side of the sleds. This iron is from two to two & a half feet long, & four inches long square. By means of two bolts &c. &c. the sled may be made fast and steady at any desired height or inclination. A board three inches and a half wide is let into the post, even with the surface of it and crossing it the upper edge being two inches above the top of the mortises the board being cut away against the mortises. Near the top of the board a cleat or piece of iron is screwed firmly to the post to prevent the timber from rising by the operation of the machine. About four feet three inches from the bottom of the sills a brace of the size of the post and three feet long is inserted in the post inclining forwards at an angle of nearly two degrees from a horizontal line. This brace is made steady by a bolt or an iron rod with a screw and nut on one end and a hook on the other passing through it and the post near the top of the cables. Beginning five feet nine inches from the bottom of the sills another mortise is made thro' the post, in the same direction as those below, an inch wide and eight inches long. A similar mortise level with this is made thro' the brace. To the underside of the brace below the mortise is fastened a piece of cast iron shaped thus [illegible] having a horizontal hole thro' the projecting end. This by means of two flat pieces of iron eight or ten inches long is connected with the end of a lever which passes thro' the mortise in the brace and post, and is about two feet nine inches long. Back of the post several holes are made horizontally thro' this iron and corresponding holes thro' the lever. A steel mouth piece with a cleat at each end connects the two levers, the spring being placed thro' each of the holes, as will give the proper hardness to the mouth piece. The end of a string made of hickory rods or other elastic timber is inserted in a mortise near the top of the brace and passing over the top of the post is

connected with the upper cross rod by a leather strap having a buckle by which it may be lengthened or shortened at pleasure. The inferior part of the machine is a slide which is a rod of iron one half inch round, three eighths of an inch in diameter and two feet five inches long. Into the lower end a hole is drilled longitudinally two inches deep to receive a socket for the chisel. About two inches from the lower end on one side a small hole is also drilled through it, and from and a half inches above another, into which is inserted and fastened the two ends of a square iron guide. Into the top of the slide a hole is also drilled two inches deep into which a bolt is inserted and fastened by a pin. This bolt has a head shaped like half a globe or ball, the top being round. Being with pins projecting at opposite sides called a yoke, connected the bolt below the head and the slide, the pins going thro' the ends of a clevis which passes over the upper cross rod. In the lower side of this clevis is fastened an iron plate into which a hole is made to receive the head of the bolt, which is secured and held by a wedge driven between the upper side of the clevis and the eye. About two inches below this iron the slide passes thro' a box shaped thus B. The projection is inserted in a hole thro' the post. Against this below the left side an anvil is made into the post and a small hole is made to the anvil from the right side. A hold fast being a piece with an eye at one end and a thumb nut on the other is inserted into the anvil and hole, the projection of the bar passing through the eye. By means of this the slide may be raised or lowered, distance from the post. The slide then passes down through a hole in the brace, and about two inches above the lower end of the slide a pin thro another box mortised thus. A treadle of second class and is made of good iron. One foot is shaped thus and the other thus. The length of the larger portion from a to b is about three inches, the ground thickness one inch, of an inch, a little projection rising at the edges a and b. The foot c

is inserted in a hole thro' the steel, and made fast in the same way as the upper bow before described. The smaller spring is the same thickness, a little shorter and is connected with the long spring so that the two half circles form a hole or box an inch and a quarter in diameter. Within this inner box is the hole thro which is from eighths of an inch in diameter being the same as that of the slide. It has a perpendicular groove cut on one side for the groove ~~in~~ to guide to run in. It is an inch and a half long and has a groove reaching all on the outside as wide as the two first described feathers are thick, and so deep that the steel thus made smaller may be received and turn within the outer box. At the upper end of this inner box on one side, outside is a small projection one fourth of an inch long, round half an inch in diameter with a hole made into it longitudinally to receive one end of a small spring or latch. By this spring or latch the slide may be turned half round and may be kept steady in place by letting the latch fall into a small groove or notch made in the ends or projections above mentioned. The machine should be set upon the right side of a stud or post and bolted to it. and if convenient a long spring may be used fastened to a post above instead of the short one attached to the machine. When the machine is to be used the movable rest is adjusted and made fast at the proper place to admit the wood to be worked between the rest and the steel on the post. The wood to be worked is to be placed on the rest, the cutter is set so as to cut either end of the wood the lower lever is pressed down by the foot which brings down the upper lever to which the slide is attached and drives the chisel into the wood. The foot being raised the spring at the top within the box draws the slide from the wood, which is then moved, and the foot again pressed as before and so on until one end of the work is finished. By means of this spring or latch the slide is then turned half round, and the other end of the work is finished by exactly the same process. The cutter may be moved or removed by means of the segment of a circular brass below that the cutter may run more low and not so much upon the bow described and the use of attaching the slide to the upper bow and that bow to the machine, and also the lower bow and circular brass as herein described

Sworn before me this 21st day of May 1828

William Lawson
Helena Tate

Henry Clay